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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,980	06/28/2000	Hiroshi Matsushima	35.G2609	6443
5514	7590	03/24/2004	EXAMINER VIDA, MELANIE M	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			ART UNIT 2626	PAPER NUMBER 6

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/604,980

Applicant(s)

MATSUSHIMA, HIROSHI

Examiner

Melanie M Vida

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "memory controller" (13), as described in the specification, (pg. 7, line 22). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. **Claims 3-5** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. **Claim 3** is equivalent to claim 2 because it inversely states what claim 2 had already described. Moreover, **claim 4** is just combining claim 2 with the equivalent inverse of claim 3 into one claim. **Claim 5** is inversely proportional to claim 4.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. **Claims 1, 9, 11, 16, 19-22, 24-25, and 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Ohta US-PGPub: 2001/0000969 A1, (hereinafter, Ohta).

Regarding, **claim 1**, Ohta teaches an electronic still camera, as shown in figures 1 and 2, which reads on “an apparatus capturing a photographic image”, (0049, lines 1-2). As shown in figure 2, the electronic still camera comprises a buffer memory (14) that stores digital images supplied from the main body, which reads on “storing the captured image in an image storage device”, (0052). Ohta teaches as shown in figure 3, that image data stored in buffer memory (26) is subsequently recorded in a memory card (14), (S15), which reads on “and recording the read image on a recording medium” (0053-0059). Moreover, a display unit (14), which reads on “a

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display device” that displays the number of already recorded frames and the remaining number of still recordable frames on the remaining capacity, which reads on “for indicating on a display a remaining number of images which can be stored in said image storage device,” (0049, lines 4-8). Ohta teaches a flow chart in figures 3, showing the basic control sequence of the CPU (21), which reads on, “a control device”, in step (S10) that displays a number of recorded images, and a method of determining said remaining number in figures 4-5, which reads on “for controlling said display device to change the display according to a remaining number of images which can be recorded on said recording medium”, (0053-0054; 0060; 0071).

Regarding, **claim 9**, Ohta illustrates in figure 2, a buffer memory (26) for storing compressed images, which reads on “wherein said image storage device comprises a buffer memory”, (0052; 0059).

Regarding, **claim 11**, Ohta illustrates a component of the electronic still camera (1), in figure 1, an exposure section (10), which reads on “wherein said apparatus comprises an image pickup apparatus”, (col. 3, lines 1-9).

Regarding, **claim 16**, Ohta teaches an electronic still camera, as shown in figures 1 and 2, which reads on “an apparatus capturing a photographic image”, (0049, lines 1-2). As shown in figure 2, the electronic still camera comprises a buffer memory (14) that stores digital images supplied from the main body, which reads on “storing the captured image in an image storage device”, (0052). Ohta teaches as shown in figure 3, that image data stored in buffer memory (26) is subsequently recorded in a memory card (14), (S15), which reads on “and reading the image stored in said image storage device, and recording the read image on a recording medium” (0053-0059). Moreover, a display unit (14), which reads on “a display

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device” that displays the number of already recorded frames and the remaining number of still recordable frames on the remaining capacity, which reads on “for displaying an image-stored state of said image storage device,” (0049, lines 4-8). Ohta teaches a switch, which reads on, “a control device”, in figures 9A-9B, that can switch the display of the remaining state of the memory card (12) either in (A) remaining capacity, or (B) remaining number of recordable frames according to a selection by the photographer, which reads on “for causing said display device to display photo-taking-related information instead of the image stored state of said image storage device”, (0095-0096).

Regarding, **claim 19**, Ohta illustrates a view finder (19), as shown in figure 8, from left to right, a mode display unit (42), an aperture mode, a shutter speed mode, to name a few, which reads on “said display device displays both the image-stored state of said image storage device and said photo-taking-related information as a bar display”, (0093).

Regarding, **claim 20**, please refer to the corresponding rejection in claim 9.

Regarding, **claim 21**, please refer to the corresponding rejection in claim 11.

Regarding, **claim 22**, please refer to the corresponding rejection in claim 16, and further wherein Ohta teaches in figures 9a-9b, that the display can be switches to show the remaining state of the memory card (12) either in (A) remaining capacity, or (B) remaining number of recordable frames, which reads on “changing what is indicated on said display device according to a remaining number of images which can be recorded on said recording medium”, (0095-0096).

Regarding, **claims 24-25, and 27**, please refer to the corresponding rejection in claim 16.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta US-PG Pub: 2001/0000969 A1 as applied to claim 1 above, and further in view of Hamilton, Jr. et al. US-PAT-NO: 6,075,889, (hereinafter, Hamilton).

Regarding, **claim 2**, Ohta teaches the apparatus according to claim 1, but fails to expressly disclose, “wherein said control device causes said display device to display the remaining number of images which can be recorded on said recording medium when the remaining number of images which can be recorded on said recording medium is less than the remaining number of images which can be stored in said image storage device”.

However, Hamilton, inherently teaches, “wherein said control device causes said display device to display the remaining number of images which can be recorded on said recording medium when the remaining number of images which can be recorded on said recording medium is less than the remaining number of images which can be stored in said image storage device” as evidenced in that once a certain number of images have accumulated in a image buffer (18) the images are interpolated and set to a conventional, removable memory card (24) via a connector (26), (col. 3, lines 40-42; lines 45-48; 57-59; col. 4, lines 25-30).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Hamilton’s image buffer.

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One of ordinary skill in the art would have been motivated to have an image buffer in order to provide storage of a plurality of images to cover most of the picture-taking situations, given the express suggestion of Hamilton, (col. 4, lines 25-30).

Regarding, **claim 3**, Hamilton inherently teaches, “wherein said control device causes said display device to display the remaining number of images which can be stored in said image storage device when the remaining number of images which can be recorded on said recording medium is greater than the remaining number of images which can be stored in said image storage device” as this is equivalent to claim 2, except with an inverse claim terminology.

Regarding, **claim 4**, please refer to the corresponding rejection in claims 2-3.

Regarding, **claim 5**, please refer to the corresponding rejection in claim 4.

8. **Claims 6-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta US-PG Pub: 2001/0000969 A1, as applied to claim 1 above, and further in view of Saito et al. US-PAT-NO: 6,256,063 B1, (hereinafter, Saito).

Regarding, **claim 6**, Ohta teaches the apparatus of claim 1. Ohta does not expressly disclose, “said control device controls said display device to change a blinking state of the display according to the remaining number of images which can be recorded on said recording medium”.

However, Saito teaches that the number of remaining frames of a counter, displaying the remaining frames is reduced by 1 and a number can be made to be flashing during a few seconds changing the number of the counter of the liquid crystal display (344) immediately after the photographing or while the photographing is being recorded, which reads on ““said control

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device controls said display device to change a blinking state of the display according to the remaining number of images which can be recorded on said recording medium”, (col. 17, lines 17-24).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Saito’s flashing (i.e. blinking) number.

One of ordinary skill in the art would have been motivated to have a blinking number in order to indicate that it is about to be adjusted by the counter.

Regarding, **claim 7**, Ohta teaches the apparatus of claim 1, but fails to expressly disclose, “wherein said control device controls said display device to change a color of the display according to the remaining number of image which can be recorded on said recording medium”.

However, Saito inherently teaches, “wherein said control device controls said display device to change a color of the display according to the remaining number of image which can be recorded on said recording medium”, as evidenced by the “display of the functions of the state of the camera card unit are distinguished by contrast and color, (col. 16, lines 24-28).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to use Ohta’s apparatus with Saito’s change of color on the display according to the remaining number of images, which can be recorded on the recording medium.

One of ordinary skill in the art would have been motivated to use a change of color in order to distinguish functions, given the express suggestion of Saito, (col. 16, lines 24-26).

9. **Claims 8, 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta US-PG Pub: 2001/0000969 A1 as applied to claims 1 and 16 above, and further in view of Yamada et al. US-PAT-NO: 6,239,837 B1, (hereinafter, Yamada).

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Regarding, **claim 8**, Ohta teaches the apparatus according to claim 1, but fails to expressly disclose, “wherein said control device determines a relationship between the remaining number of images which can be stored in said image storage device and the remaining number of images which can be recorded on said recording medium”.

However, Yamada illustrates in figure 5, a step (S44) wherein a microprocessor (MPU1) is used to confirm the number of image data in main memory, and capacity or free area in an auxiliary memory, which reads on “wherein said control device determines a relationship between the remaining number of images which can be stored in said image storage device and the remaining number of images which can be recorded on said recording medium”, (col. 7, lines 20-24; col. 9, line 66 through col. 10, line 15).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Yamada’s microprocessor to determine a relationship between images remaining number of images which can be stored on a storage device and on a recording medium.

One of ordinary skill in the art would have been motivated to determine a relationship between images remaining number of images which can be stored on a storage device and on a recording medium, in order to shorten the processing time, given the express suggestion of Yamada, (col. 10, lines 10-12).

Regarding, **claim 17**, Ohta teaches the apparatus according to claim 16, but fails to expressly disclose, “said photo-taking related information comprises correction control information”.

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However, Yamada illustrates icon marks in figure 3, on a display (30) for indicating “S” superfine mode, “F” fine mode, “N” normal mode, to name a few, which reads on “said photo-taking related information comprises correction control information”, (col. 4, lines 1-9).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Yamada’s display of correction control information.

One of ordinary skill in the art would have been motivated to display correction control information so that the operator can appropriately operate the mode switch (32) given the express suggestion of Yamada, (col. 4, lines 43-45).

Regarding, **claim 18**, Ohta teaches the apparatus according to claim 16, but fails to expressly disclose, “said photo-taking related information comprises exposure correction information”.

However, Yamada illustrates an icon mark, in figure 3, of a flash photographing state (48), which reads on “said photo-taking related information comprises correction control information”.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Yamada’s display of exposure correction information.

One of ordinary skill in the art would have been motivated to display exposure correction information, so that the operator can appropriately operate the mode switch (32), given the express suggestion of Yamada, (col. 4, line 43-45).

10. **Claims 10, 12, 14-15, 22, and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta US-PGPub: 2001/0000969 A1 as applied to claims 1 and 16 above, and further in view of Ogino, US-PAT-NO: 5,633,976, (hereinafter Ogino).

Regarding, **claim 10**, Ohta teaches the apparatus of claim 10, but fails to expressly disclose, “wherein when the number of remaining images which can be stored in said image storage device is zero, said control device causes said display device to display a time until a new image can be stored in said image storage device”.

However, Ogino teaches in figures 8a-8b, that if the remaining capacity of memory is equal to zero (S31), which reads on “wherein when the number of remaining images which can be stored in said image storage device is zero” then the display indicates that “PHOTOGRAPHING IMPOSSIBLE WARNING DISPLAY”, (S53), which reads on “said control device causes said display device to display a time until a new image can be stored in said image storage device”, (col. 9, lines 41-45).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Ogino’s display to indicate a time an image will be stored if memory is full.

One of ordinary skill in the art would have been motivated to display that it is impossible to store the image when the memory is full, so that the user can make room in memory by downloading the memory card.

Regarding, **claim 12**, Ohta teaches an electronic still camera, as shown in figures 1 and 2, which reads on “an apparatus capturing a photographic image”, (0049, lines 1-2). As shown in figure 2, the electronic still camera comprises a buffer memory (14) that stores digital images supplied from the main body, which reads on “storing the captured image in an image storage device”, (0052). Ohta teaches as shown in figure 3, that image data stored in buffer memory (26) is subsequently recorded in a memory card (14), (S15), which reads on “reading the image stored

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in said image storage device, and recording the read image on a recording medium” (0053-0059). Moreover, a display unit (14), which reads on “a display device” that displays the number of already recorded frames and the remaining number of still recordable frames on the remaining capacity, which reads on “for displaying an image-stored state of said image storage device;” (0049, lines 4-8).

Ohta does not expressly disclose, “a control device for causing said display device to display a time until a new image can be stored in said image storage device when the remaining number of images which can be stored in said image storage device is currently zero”.

However, Ogino teaches of a memory control circuit (34), as shown in figure 1, which reads on “a control device” and that if the remaining capacity of memory is equal to zero (S31) as shown in figure 8a, which reads on “wherein when the number of remaining images which can be stored in said image storage device is zero” then the display indicates that “PHOTOGRAPHING IMPOSSIBLE WARNING DISPLAY” as shown in figure 8b, (S53), which reads on “said control device causes said display device to display a time until a new image can be stored in said image storage device”, (col. 9, lines 41-45).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to modify Ohta’s apparatus with Ogino’s display to indicate a time an image will be stored if memory is full.

One of ordinary skill in the art would have been motivated to display that it is impossible to store the image when the memory is full, so that the user can make room in memory by downloading the memory card.

Regarding, **claim 14**, please refer to the corresponding rejection in claim 9.

Regarding, **claim 15**, please refer to the corresponding rejection in claim 11.

Regarding, **claims 22 and 26**, please refer to the corresponding rejection in claim 12.

11. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta US-PG Pub: 2001/0000969 A1 in view of Ogino, US-PAT-NO: 5,633,976, (hereinafter Ogino) as applied to claim 12, above, and further in view of Nishi, US-PAT-NO: 6,249,313 B1, (hereinafter, Nishi).

Regarding, **claim 13**, Ohta in view of Ogino teach the apparatus according to claim 12, but fail to expressly disclose, “wherein when the remaining number of images which can be stored in said image storage device is not zero, said control device causes said display device to display the remaining number of images which can be stored in said image storage device instead of the time until the new image can be stored in said image storage device”.

However, Nishi illustrates in figure 11, in step (256) a query if the number of frames remaining on card zero is false, then steps 257-253 are executed, wherein step 253 displays the number of remaining frames, which reads on ““wherein when the remaining number of images which can be stored in said image storage device is not zero, said control device causes said display device to display the remaining number of images which can be stored in said image storage device instead of the time until the new image can be stored in said image storage device”.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify Ohta in view of Ogino’s apparatus with Nishi’s step to display remaining frames (i.e. images).

One of ordinary skill in the art would have been motivated to display the remaining frames in order to record image data on card when the card is not full, given the express suggestion of Nishi, (step 258).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hamilton Jr. et al. US-PAT-NOS: 6,542,187, 6,192,162, 6,697,107, an electronic still camera that displays remaining number of images on memory.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie M Vida whose telephone number is (703) 306-4220. The examiner can normally be reached on 8:30 am 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Melanie M Vida
Examiner
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March 19, 2004

MARK WALLERSON
PRIMARY EXAMINER

